

28 OCT 1959

Rpt. 13.

No. 12248

REPORT ON ELECTRICAL EQUIPMENT.

(OTHER THAN FOR THE PROPULSION OF THE VESSEL)

Received at London Office

Date of writing Report 27/10 1959. When handed in at Local Office 19 Port of Stockholm

No. in Survey held at Gävle Date, First Survey 17.3.59. Last Survey 21.9.1959. Reg. Book. (No. of Visits 11)

40015 on the Twin Screw Motorship "AGATAN" Tons Gross 1500 Net -

Built at Gävle By whom built A/B Gävle Varv Yard No. 101 When built 1959

Owners U.S.S.R. Port belonging to Leningrad

Installation fitted by A/B Elektroarmatur, Gävle When fitted 1959

Is vessel equipped for carrying Petroleum in bulk No Is vessel equipped with D.F. Yes E.S.D. Yes Gy.C. Yes Sub.Sig. No Radar Yes

Plans, have they been submitted and approved Yes System of Distribution 3-phase Voltage of Lighting 220

Heating 220 Power 380 D.C. or A.C., Lighting A.C. Power A.C. If A.C. state frequency 50

Prime Movers, has the governing been found as per Rule when full load is thrown on and off Yes Generators ~~xxxxxx~~

Are the generators arranged to run in parallel Yes ~~xxxxxx~~

Have machines 100 kw. and over been inspected by the Surveyors during manufacture and testing Yes Have certificates of test for machines under 100 kw. been supplied and the results found as per Rule Yes Position of Generators Main engine room: One on port and one on starboard side aft. Aux. engine room: Port, centre and starboard.

is the ventilation in way of generators satisfactory Yes are they clear of inflammable material and protected from mechanical injury and damage from water, steam and oil Yes Switchboards, where are main switchboards placed Main engine room: On a platform port side aft, Aux. engine room: On a platform at forward end.

are they in accessible positions, free from inflammable gases and acid fumes and protected from mechanical injury and damage from water, steam and oil Yes, what insulation is used for the panels Dead front construction ~~xxxxxx~~ material is it an Approved Type ~~xxxxxx~~ Is the construction as per Rule, including locking of screws and nuts Yes Description of Main Switchgear for each generator and arrangement of equaliser switches Triple pole linked circuit breaker with overcurrent release (in 2 phases), Reverse power release (in one phase) and No Volt release (between 2 phases).

and the switch and fuse gear (or circuit breakers) for each outgoing circuit Triple pole linked circuit breaker with overcurrent trip in each phase.

Are compartments containing switchboards composed of fire-resisting material or lined as per Rule Yes Main E.R.6 Instruments on main switchboard Aux. E.R.13

M.E.R.3 M.E.R.2 + 1 frequency meter on each switchboard ammeters A.E.R.9 voltmeters A.E.R.2 synchronising devices. ~~xxxxxx~~ Earth Testing, state means provided Earth indicating lamps. Preference Tripping, state if provided None fitted ~~xxxxxx~~

Switches, Circuit Breakers and Fuses, are they as per Rule Yes, are the fuses an Approved Type Yes make of fuses ASEA, are all fuses labelled Yes If circuit breakers are provided for the generators, at what power overload do they operate 110 % of the amperage and 10 seconds, and at what ~~xxxxxx~~ do the reverse ~~xxxxxx~~ protective devices operate 15 % Cables, are they insulated and protected as per Rule Yes

~~xxxxxx~~ state maximum fall of pressure between bus bars and any point under maximum load less than 6% Are all paper insulated and varnished cambric insulated cables sealed at the ends None fitted

Are all the cable runs in accessible positions not exposed to drip or accumulation of water or oil, high temperatures or risk of mechanical damage Yes, are any cables laid under machines or floorplates Yes, if so, are they adequately protected Yes State type of cables (if in conduit this should also be stated) in machinery spaces VIRLC + A, galleys VIRLC + A and laundries VIRLC + A State how the cables are supported or protected

Machinery spaces: VIRLCA clipped to structure or cable trays. Accommodations: VIRLC clipped to structure or run in conduit.

Are all lead sheaths, armouring and conduits effectually bonded and earthed Yes Are all cables passing through decks and watertight bulkheads provided with deck tubes or watertight glands Yes, where unarmoured cables pass through beams, etc., are the holes effectively bushed Yes Refrigerated chambers, are the cables and fittings as per Rule Yes - domestic only.

~~xxxxxx~~ and ~~xxxxxx~~ ~~xxxxxx~~



Alternative Lighting, are the groups of lights in the engine and boiler rooms arranged as per Rule. Yes. Emergency Supply, state position
 Main eng. room: 2 lamps (1 group) connected before circuit breakers and 4 lamps (1 group) from battery.
 Aux. eng. room: 3 lamps (1 group) connected before circuit breakers and 2 lamps (1 group) from battery.

Navigation Lamps, are they separately wired. Yes. controlled by separate double pole switches and fuses. Yes. Are the switches and fuses in
 a position accessible only to the officers on watch. Yes. is an automatic indicator fitted. Yes. Is an alternative supply provided. Yes.

Secondary Batteries, are they constructed, fitted and adequately ventilated as per Rule. Yes. state battery capacity in
 ampere hours. One 160 Ah for wireless
 One 160 Ah for emerg. light. ~~When required to be described in accordance with 1919 International Convention~~

Lighting, is fluorescent lighting fitted. No. ~~fluorescent lighting is fitted~~

Fittings, are all fittings on weather decks, in stokeholds and engine rooms and wherever exposed to drip or condensed moisture, weatherproof. Yes.

Searchlights, No. of 3, whether fixed or portable. Fixed, are they of the carbon arc or of the filament type. Filament

Heating and Cooking, is the general construction as per Rule. Yes, are the frames effectually earthed. Yes, are heaters in the
 accommodation of the convection type. Yes. Motors, are all motors constructed and installed as per Rule and placed in well-ventilated
 compartments in which inflammable gases cannot accumulate and protected from damage from water, steam and oil. Yes.

Are motors coupled to oil fuel transfer and pressure pumps capable of being stopped from a position accessible in the event of fire in the pump
 compartment. Yes. Have motors of 100 BHP and over been inspected by the Surveyors during manufacture and testing. None fitted

Have certificates of test for motors under 100 BHP intended for essential sea services been supplied and the results found as per Rule. Yes

Lightning Conductors, where required are they fitted as per Rule. None fitted

~~Ship carrying Oil having a Flash Point of less than 150°F, fitted with the special equipment of the Rules for such ships. Yes.
~~Are the fittings for pump~~~~

~~Are the fittings for pump~~

E.S.D., if fitted state maker. ATLAS location of transmitter and receiver. In No. 2 deep tank

Spare Gear, if the vessel is for open sea service have spares been provided as per Rule and suitably stored in dry situations. Yes

Insulation Tests, has the insulation resistance of all circuits and apparatus been tested and found satisfactory. Yes

PARTICULARS OF GENERATING PLANT.

DESCRIPTION OF GENERATOR.	No. of	MAKER.	RATED AT				PRIME MOVER.		
			KV# per Generator	Volts.	Ampères.	Revs. per Min.	TYPE.	MAKER.	
MAIN	2	Hans Still AG (Ham).	100	400	144	1000	Diesel	M.A.N. AG (Aug.)	
	3	" " " "	200	400	289	600	"	" " " "	
EMERGENCY ROTARY TRANSFORMER									

GENERATOR CABLES.

DESCRIPTION.	No. of	KVA	CONDUCTORS.		MAXIMUM CURRENT IN AMPERES.		APPROX. LENGTH (lead plus return) in	INSULA-TION.	PROTECTIVE COVERING.
			No. in Parallel per Pole.	Sectional Area sq. mm.	In the Circuit.	Rule.			
MAIN GENERATORS	2	100	2	3 x 70	144	251	8 & 26	VIR	LC + A
	3	200	3	3 x 95	289	315	8, 10 & 12	"	"
EMERGENCY GENERATOR									
ROTARY TRANSFORMER: MOTOR GENERATOR									

MAIN DISTRIBUTION CABLES (to Auxiliary Switchboards, etc.).

DESCRIPTION.	No. of	Sectional Area sq. mm.	In the Circuit.	Rule.	APPROX. LENGTH (lead plus return) in	INSULA-TION.	PROTECTIVE COVERING.
From switchboard No. 1 in Aux.E.R. to switchboard No. 2 in Main E.R.	3	3 x 95	289	315	60	VIR	LC + A

DISTRIBUTION CABLES (to Section-Boards and Distribution-Fuse-Boards, etc.).

DESCRIPTION.	CONDUCTORS.		MAXIMUM CURRENT IN AMPERES.		APPROX. LENGTH (lead plus return) in	INSULA-TION.	PROTECTIVE COVERING.
	No. in Parallel per Pole.	Sectional Area sq. mm.	In the Circuit.	Rule.			
DFB K 1 for prov. refr. machinery	1	25	37	44	32	VIR	LC & A
DFB K 2 for purifiers, oil heaters etc.	1	95	105	105	50	"	"
DFB K 3 for KAMEWA-pumps etc.	1	70	90	87	56	"	"
DFB K 4 for ballast pump & air compressors	1	70	74.5	87	40	"	"
DFB K 5 for galley	1	50	63	69	30	"	"
DFB K 6 for workshop motors	1	4	5.3	16	40	"	"
DFB K 7 for laundry	1	10	18.3	27	40	"	"
DFB K 8 for Hi-press ventilation	1	25	35.3	44	56	"	"
DFB K 9 for oil fuel pumps	1	10	24.8	27	12	"	"
DFB B 1 for lighting in main E.R.	1	4	13.5	16	40	"	"
B2 & B2A for lighting on main deck	1	16	35.4	33	60	"	"
DFB B 3 for nav. lights on bridge deck	1	4	0.75	16	40	"	"
DFB B4 & B4A for lighting on bridge deck	1	50	52	69	40	"	"
DFB B 5 for navig. instruments	1	25	42.5	44	60	"	"
DFB B6 & B6A for heaters in accom. forward	1	25	42	44	40	"	"
DFB B 7 for heaters in accom. on main deck	1	50	41.5	69	20	"	"
DFB B 8 for searchlights & lighting	1	10	22	27	60	"	"
DFB B9a & B9b for heating & lighting on lower deck	1	25	45	44	44	"	"

MOTOR CABLES.

ALL IMPORTANT MOTORS TO BE ENUMERATED.	No.	B.H.P.	Sectional Area sq. mm.	In the Circuit.	Rule.	APPROX. LENGTH (lead plus return) in	INSULA-TION.	PROTECTIVE COVERING.	
Starting air compressors	2	19	1	16	27.4	33	12&28	VIR	LC & A
Stand by lub. oil pumps	2	10.5	1	6	15.2	21	26&24	"	"
Main cooling water pumps	3	36	1	50	50.5	69	40, 44 & 40	"	"
Aux. cooling water pumps	1	14	1	10	22	27	24	"	"
Ballast pump	1	15	1	16	22	33	12	"	"
Bilge pump	1	9.5	1	6	13.8	21	16	"	"
Fire pump	1	15	1	16	22	33	20	"	"
O.F. transfer pump	1	16	1	16	23	35	26	"	"
O.F. transfer pump	1	4	1	4	5.8	16	16	"	"
Stand by pumps for KAMEWA	2	4.5	1	4	6.5	16	34 & 40	"	"
Oil purifiers	3	3.5	1	2.5	5.1	13	12, 16 & 20	"	"
DB feed water pump	1	3.2	1	2.5	5.3	13	70	"	"
Turning gears	2	4.5	1	4	6.5	16	10 & 16	"	"
Eng. room fans	2	8.5	1	6	12.5	21	10 & 14	"	"
Steering gear	1	15	1	10	22	27	54 & 100	"	"
Windlass forward	1	26	1	35	37.5	55	60	"	"
Windlass aft	1	16	1	16	23	33	100	"	"
Towing winch	1	45	1	35	60	55	70	"	"
Aux. cool. water pump	1	5.5	1	4	7.3	16	12	"	"

NOTE.—Use Rpt. 13 Continuation Sheet if the above space is insufficient.

The Electrical Equipment is installed in accordance with the approved plans and the requirements of the Rules.

All Insulated Conductors are guaranteed to have been tested at the maker's works as specified in the Rules.

The foregoing is a correct description.

A. B. ELEKTRO-ARMATUR

H. S. Munch

Electrical Contractors.

Date 21-10-1959

COMPASSES.

Have the compasses been adjusted under working conditions. Yes

Aktiebolaget Gävle Varv

Sigurdur Engvaldson

Builder's Signature.

Date 22.10.59

Have the foregoing descriptions and schedules been verified and found correct. Yes

Is this installation a duplicate of a previous case. Yes If so, state name of vessel "PAMIR" & "ALDAN"

Plans. Are approved plans forwarded herewith. No If not, state date of approval 2.5.58.

Certificates. Are certificates of test for motors engaged on essential sea services and generators forwarded herewith. Yes

General Remarks. (State quality of workmanship and materials, opinions as to class, etc.)

The electrical installation of this vessel has been installed in accordance with the Rules and approved plans, and tested under working condition to my satisfaction.

The workmanship and materials used are good.

5m.6.50.—Transfer. (MADE AND PRINTED IN ENGLAND)
(The Surveyors are requested not to write on or below the space for Committee Minutes.)

+ *ES*
2.11.59.

Total Capacity of Generators 800 KVA ~~XXXXXX~~ (P.F.=0.8).

The amount of Fes ... kr. 2.130:--
When applied for, 23/10 19 59.

Travelling Expenses (if any) ~~XXXXXX~~ : 19.

J. Eriksson
Surveyor to Lloyd's Register of Shipping.

Committee's Minute FRIDAY 11 DEC 1959

Assigned See App-1



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